

REMARKS

Pending Claims

Claims 1-20 are all the claims pending in the application. Claims 3 and 4 were withdrawn from consideration pursuant to a restriction requirement. This Amendment amends claims 2, 7, and 8, adds claims 9-20, and addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

The Examiner indicates the claims 1, 2 and 4-7 are pending, and that claim 4 was withdrawn from consideration. Applicants submit that claim 3 is also pending, but that claim 3 was also withdrawn from consideration after the election of August 20, 2001. Applicants respectfully request correction of the record.

The Examiner has ignored a second Preliminary Amendment filed August 9, 2002. The Examiner orally indicated to Applicants' undersigned representative that he intended to issue a new action on August 12, 2002. Applicants filed the Preliminary Amendment August 9, 2002, hand-carrying the amendment to the Art Group of the Examiner, and leaving a telephone message for the Examiner on the morning of August 12, 2002, asking to discuss the Amendment. The Examiner responded on August 12, 2002, stating that he had already issued the Office Action, and that he would not consider the Preliminary Amendment. However, the Office Action is actually dated August 23, 2002. Applicants respectfully submit that the Preliminary Amendment filed August 9, 2002, should have been considered by the Examiner.

Additionally, Applicants inadvertently misnumbered the new claim added in the Preliminary Amendment filed August 9, 2002. The new claim required that the at least a

quantum well layer be one quantum well layer. The claim should be numbered “8” rather than “7”. Correction is made herein.

Claim Objections

Claim 7 is objected to for being a duplication of Claim 6. Claim 6 requires “less than or equal to 1 μm ,” whereas claim 7 requires “less than 1 μm .” Applicants submit that claim 7 is narrower than claim 6. To emphasize this fact, Applicants have amended claim 7 to depend from claim 6.

Claim Rejections - 35 U.S.C. § 112

Claims 1-2 and 5-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states:

“Regarding Claim 1, it is not clear 1) where the waveguide layers are in relation to the quantum well layer, 2) if the entire active region is formed of InGaAsP as claimed, 3) what part of the upper cladding layer is removed in relation to the remainder of the semiconductor laser, i.e. at the peripheral of the device, etc., and 3) 4) what the configuration of the cladding layer is after the upper waveguide is removed, i.e. a ridge structure as claimed in Claim 2.

In addition, to overcome indefiniteness issues, the claimed subject matter must include the structural details of the cladding/waveguide interface that the Applicant has disclosed as part of the claimed invention.”

With regard to rejections (1) and (2), Applicants submit that these issues were addressed in the Preliminary Amendment of August 9, 2002. Applicants submit that these amendments to claim 1 should not be the basis for issuing a final office action, since the Amendment was

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/315,068

submitted weeks prior to the issuance of the Office Action, and before the deadline set by the Examiner, as set forth above.

With regard to rejections (3) and (4), Applicants submit that claim 1 is definite in its present form, and that the Examiner is requesting that the independent claim 1 be arbitrarily narrowed to describe specific structures and embodiments from the disclosure. The specification, on page 8, describes that “[w]hen removing by etching a part of the upper cladding layer, conventionally, there is employed a method in which a part of the upper cladding layer is left unetched by providing an etching stop layer which differs from the upper cladding in composition...” In comparison, claim 1 requires that a part of the upper cladding layer on the upper optical waveguide layer is selectively removed up to the interface of the upper cladding layer and the upper optical waveguide layer.” Accordingly, claim 1 particularly points out and distinctly claims a broad embodiment of the present invention, which is proper under 35 U.S.C. § 112, second paragraph. Moreover, claim 2 already recites formation of the ridge structure.

Nevertheless, Applicants have added dependent claims 10 and 11 to further describe the structure of the upper cladding layer. Applicants have also made minor editorial amendments to claim 2 to improve antecedence and idiom.

Claims 1-2 and 5-7 are further rejected under 35 U.S.C. § 112, second paragraph, as omitting essential structural cooperative relationships of the elements. The Examiner states:

“The omitted structural cooperative relationships are: 1) the thicknesses of the waveguide and cladding layers that enable the selective removal of the waveguide layer to the cladding layer interface

and 2) the relationships of the cladding and waveguide layers, *i.e.*, as discussed above.”

With regard to rejection (1), Applicants submit that the invention is defined as precise as the subject matter permits, and that the Examiner is again requesting that the claims be narrowed to a specific embodiment. The necessary thicknesses of the layers would depend, in part, upon the exact materials, etchant, and etching procedures employed (*see* page 8, line 23 to page 9, line 6), such that amending the claims in the manners suggested by the Examiner would arbitrarily narrow the scope of the claimed subject matter.

Nevertheless, Applicants have added new dependent claim 9 to further define the thicknesses of these layers.

With regard to rejection (2), Applicants submit that this issue was addressed in the Preliminary Amendment of August 9, 2002.

Claim Rejections - 35 U.S.C. § 102

The Examiner states that the application was not filed on or after November 29, 2000. More accurately, the application is a Continuation Application under 37 C.F.R. § 1.53(d) that was filed on June 3, 2002, based on a parent case claiming priority to May 21, 1998. Accordingly, Applicants respectfully submit that the application should be treated as if filed after November 29, 2000, and examined based on the post-AIPA 35 U.S.C. § 102(e), to the extent relevant.

The claims are rejected as being anticipated by U.S. Patent 6,195,373 to Fukunaga. Since the May 21, 1998, 35 U.S.C. § 119 priority date of the present application is earlier than the

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/315,068

September 29, 1998, U.S. filing date of the cited reference, it is not even prior art, and the § 102(e) rejection is improper. Accordingly, Applicants submit herewith a verified translation of the priority document (Japanese application 139623/1998) to perfect the claim for priority.

New Claims

Applicants add new claims 12-20. No new matter is added. Entry and consideration of claims 12-20 are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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APPENDIX

Version With Markings To Show Changes Made

IN THE CLAIMS:

The claims are amended as follows:

2. (Amended) A semiconductor laser as defined in Claim 1 in which the structure where [a] said part of the upper cladding layer on the upper optical waveguide layer which is selectively removed up to the interface of the upper cladding layer and the upper optical waveguide layer forms a ridge structure.

7. (Amended) A semiconductor laser as defined in Claim [4] 6, wherein a thickness of the upper cladding layer is greater than zero, but less than 1 μ m.

[7] 8. (Amended) A semiconductor laser as defined in Claim 1, wherein said at least a quantum well layer is one quantum well layer.

Claims 9-20 are added as new claims.